INTRODUCTION TO AN ENGINEER

By MARIE MACARIO

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Moonlight filtered down on an evening quite clear
To the plains in the vale of Mount Nittany;
As a State College girl,
Who was just sweet sixteen
Rushed up to her mom and hesitantly
Said, "Mother, my dear
I've wonderful news
For you on this evening so clear;
There's a party tonight
And I've just got a date—
A blind date with a young engineer."

Her mother gasped twice,
Turned pale as a sheet
And fell in her chair as though dead,
But was quickly revived
With a half glass of rum
And a quite careful blow on the head.
She then sat up straight
And cooled her hot brow
With a few applications of ice,
Cleared her throat and began
In an ominous tone
This motherly bit of advice:

"To you of all persons
Who has never done wrong,
Never known jealousy, hatred, or fear,
Oh, why should it be
You reach down in the bag
And pull out a poor, dumb engineer?
Didn't you know,
Or haven't you heard
This of all prospects is the one prospect drear:
To be left for an evening
Holding the bag—
Or worse, a poor dumb engineer!

"Imagine a man
Who could gaze at a water-fall
In the half-dusk of evening's first hour,
And then sadly sigh,
Not for the beauty,
But for the waste of such beautiful power.
Imagine a person
Who has sunk down so low
That the grandeur of all Borealises
Are lost. As he claims,
They can all be explained
By a simple Maxwellian analysis.

"His brain is a mess
Of circuits and wires,
His heart but a cold turning gear,
So pity the girl
On a swell moonlit night
Alone with a dumb engineer;
For the moon in the sky
Was not made for love,
But for phase and total eclipses;
And the planets to move
In celestial orbits
Of slightly eccentric ellipses.

"Her soft vibrant voice
Which should thrill any man
Is merely a group of harmonics
Of an audio tone
Employed in a manner
That could all but predict supersonics.
And silvery reflections
From her eyes and her hair
That should set a true artist to gloating,
He will tell her at once
Could all be removed
By a transparent quarter-wave coating.

"With well seasoned food
She can't tempt him at all;
His one-track mind can't he halted.
When thoughts are on math
He'll eat broken glass
Without noticing whether it's salted.
Shakespeare or Poe
Is out of his line;
He knows nothing of art or great fictions
He only knows why
They place teeth on gears—
Because tooth is stronger than friction.

"If he even could add
Or perhaps multiply,
She'd forgive him for being a bore,
But two times two
By his trusty slide-rule
Is three-ninety-nine—call it four.

"And all values he uses
Are taken from curves,
So it seems from his very vague ranting.
Yet instead of becoming
An expert on those
He neglects the ones most enchanting.

"So the moon may shine down,
The sky may be clear,
And the stars may be bright overhead;
And my daughter may be
At her beautiful best—
She'd still be better off dead.

(Please turn to page 34)

The most important part of this picture is the *FLAME*

THE ENGINES of high-flying planes "breathe" in rarefied atmosphere by means of the turbosupercharger which supplies them with air.

The turbosupercharger—a small, high-speed turbine-type air compressor (see sketch below)—is driven by the energy in the exhaust flames from the plane's engines.

Driving turbines by gas flames has been a dream of engineers for many years. However, they had to wait for the metal parts that would *remain* hard and strong enough to withstand the wear of flaming heat at terrific speed.

Alloys that are strong even when red hot and, at the same time, adequately resistant to corrosion and wear were developed more than 20 years ago by HAYNES STELLITE COMPANY, a Unit of UCC. All these years the ways to shape any but simple parts of these "red-hard" alloys have been too slow and costly for mass production. Now Haynes Stellite has perfected a new technique for making cast precision parts by the millions and this has made turbosuperchargers possible and practical.

Gas turbines, jet-propelled planes and similar important scientific developments are making swift strides now because this Unit of UCC gives engineers mass production of precision parts that remain strong, hard and wear-resisting even when red hot.

▼

Engineers, designers, and teachers are invited to send for booklet P 6 "Tables of Physical, Mechanical and Chemical Properties—Products of Haynes Stellite Company." There is no obligation.

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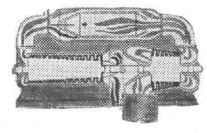

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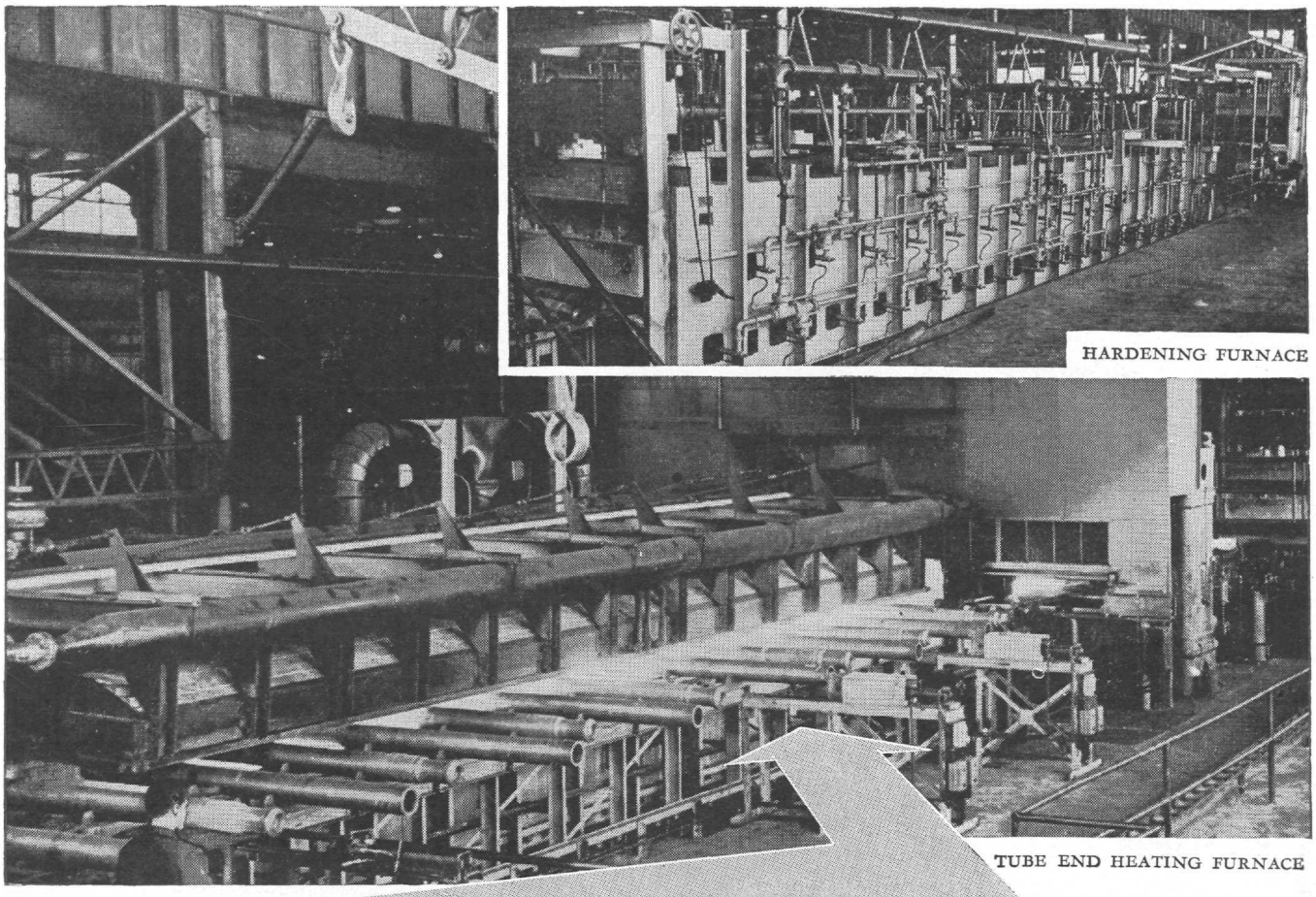
INTRODUCTION . . .

(Continued from page 24)

So I'll think of you often
As evening wears on,
Expressing regrets with one bitter tear
For all of this beauty
Going to waste,
While you're out with a dumb engineer!"



HARDENING FURNACE

TUBE END HEATING FURNACE

GAS FIRED FURNACES help produce the new TUBULAR RAILWAY AXLES

At the Allenport, Pa., plant of the Pittsburgh Steel Company, newly perfected, weight saving tubular railway axles are being turned out on a straight production line. In the course of manufacture, they pass through giant Gas-fired furnaces for end heating in upset forging, for hardening and for drawing.

Concentric forging to close tolerances and exacting steel characteristics in the finished product dictated the choice of Gas-fired equipment. An engineer's report states that "very little supervision of heating processes is required. Uniformity of heating and temperature control permits duplication of desired results on a production line basis. Control and flexibility of Gas heating eliminate many variables."

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